I regard the disease as *in the highest degree* contagious. Many experiments were made with the view of ascertaining this fact. When an isolated case would occur, I shut the patient in a room with the other sick, and removed all others from the sick quarter. All communication, as far as possible, was prevented between the sick and well, and yet not a single person escaped. Servants from other plantations came to this one, and carried the disease to their homes. I shut them up, in their turn, cut them off from all communication with their fellows, and succeeded in keeping the disease to a single house, when far away from the "Black Tongue" district.

If recognized early, this disease is perfectly amenable to treatment. Since the epidemic, the author has treated two hundred and seventy-five cases, and, of these, but five died, three of which might have been saved if they had been seen early. There are two diagnostic symptoms by which this disease can be surely known, namely, a fiery eye, and a blue, congested appearance of upper lip; the latter symptom is especially apparent among children. A view of throat is, of course, positive.

Treatment must be prompt, immediate, and untiring. Thorough application of a solution of nitrate of silver, of proper strength, at all stages of the disease, and as much brandy as the patient can digest. The chlorate of potash and muriated tincture of iron are also highly useful; the latter, especially, stands high in my estimation, forming as it does almost a specific in an analogous disease, erysipelas. Depressing remedies are worse than useless, nay, accelerate death. Blisters, and all outward applications, are highly injurious; the only one used in this epidemic, a strong solution of iodine, I am not entirely satisfied with, as it sometimes produced frightful ulcerations. If the patient cannot swallow, the following enema may prove beneficial: Port wine ℥j; quinine gr. v to x; beef-tea ℥ij—to be used milk-warm every two or three hours. We are never permitted to despair in this disease; the simple passage of the probang has saved patients who seemed in articulo mortis, and free stimulation perfected the cure. There are many other remedies recommended, and may be tried; the simple course laid down above, has answered for the epidemic seen by the author.

OAKLAND COLLEGE, Miss.

ART. VIII.—*Case of Transverse Fracture of the Patella, successfully treated by means of Malgaigne's Hooks.* By JOHN H. PACKARD, M.D., of Philadelphia.

ON the 28th of November, 1860, I was requested by a friend engaged in an exclusively medical practice to take charge of a lady who had that morning sustained a fracture of the left patella. She had, in going down

stairs with her child, two years old, in her arms, thought herself at the bottom of the flight when she had still a step to descend; she fell, and found that, without to her knowledge the receipt of any blow, the patella had given way. A physician living in the neighbourhood was called in at once, and applied a straight board at the back of the limb, with compresses and a bandage to maintain the fragments in apposition. When her own physician saw her, in the afternoon, the swelling and pain were so great that he directed the application of forty leeches around the joint; the bites bled freely, but there was still great tenderness when I visited the patient with him in the evening.

Upon careful examination, we now made out that the fracture was transverse, and the lower fragment small; it was impossible to define the exact extent of separation of the two portions, but they did not seem to be more than three-quarters of an inch or an inch apart. The compresses were replaced by strips of adhesive plaster applied transversely so as to fix the lower fragment and draw down the upper; a bladder partly filled with pounded ice was laid over the knee, and morphia freely given. This plan of treatment, with very slight modifications, was adhered to for several days.

Mrs. J., the patient, was a very fleshy person, about thirty years of age, and accustomed to somewhat high living. She soon began to feel the effects of pressure upon the bony points as she lay upon her back, and to suffer from constipation. This latter difficulty seemed partly owing to her supine posture. Hence it became very desirable to employ some means by which the coaptation of the fragments should be insured even without absolute quiet.

On the 6th of December, at 11 A. M., eight days after the occurrence of the accident, I inserted the hooks invented by M. Malgaigne for the treatment of these fractures. The inflammation had almost entirely subsided, and I had the full consent of the patient, as well as of my colleague, to the experiment. A good deal of pain seemed to be caused by the application of the instrument, but by the external use of lead-water, and the exhibition of morphia internally, it was assuaged in great measure. The adhesive strips were reapplied, for the sake of safety, and the posterior splint and the bandage were retained. By measurement, the length of the patella was found to be the same as that of the sound bone, the hooks being firmly opposed to one another. At 8 P. M. the patient was free from fever, and there was no evidence of anything unfavourable locally.

On the 11th, five days after the insertion of the hooks, I endeavoured to tighten them by a few turns of the screw; but they were as closely approximated as they well could be. A few days after this, the splint was found to be unnecessary, except as affording a convenient resting-place for the limb; and the bandage was only very loosely applied. On the 21st a trifling degree of soreness and swelling was present, especially about the lower pair of hooks; a rag wet with lead-water was laid over the part, and next day an ointment composed of equal portions of Goulard's cerate and extract of belladonna was applied, after which there was no further trouble.

On the 6th of January, 1861, the thirty-first day from the insertion of the hooks, and the thirty-ninth from the occurrence of the fracture, the instrument was removed. Some swelling of the integuments was apparent, but the bone seemed perfectly solid. The patient was directed to remain in bed, but to use as much motion of the knee-joint as she could, with a view to the restoration of its flexibility.

By the 1st of February Mrs. J. was walking out in the street, having, of course, gained confidence by previous attempts in her room and about her house. She had no sense of insecurity in the limb, and the joint was daily becoming more supple, although, as might have been expected, by slow degrees.

So far as I am aware, the case now detailed is the first one in this country in which trial has been successfully made of M. Malgaigne's plan.[1] The remarks which I have to offer in connection with the foregoing account will have reference, in the first place, to the plan itself; in the second place, to its supposed dangers; and lastly, to its real advantages.

A description of the instrument may not be out of place, since to some of the readers of the *Journal* it may be unfamiliar. The one I used is larger than the one described by Malgaigne in 1847. It is composed of two plates of steel, three-quarters of an inch in width and a quarter of an inch in thickness. Each of these plates is at one extremity recurved downwards into two very sharp hooks an inch and a half long, the points of which are parallel with the plates themselves. The upper plate is two inches and a half in length before the curve of the hooks becomes decided; the lower one is shorter than this by an inch. Projecting up from the lower plate, about three-eighths of an inch from the notch between the hooks, is an upright, which runs in a slit rather more than an inch and a half long in the upper plate; at the extremity of this slit is another upright, fixed in the upper plate, and these two uprights are pierced by a screw which runs parallel to the plates, forcing them, and therefore the points of the hooks, together. The screw is squared at one end, so as to be turned by means of a key.

The lower pair of hooks are to be inserted first, the skin being drawn slightly downwards; they should catch the edge of the tip of the lower fragment, on either side of the ligamentum patellæ. Next the upper plate is slipped on to the lower (which is turned up for the purpose), and its hooks forced in so as to pierce the skin at right angles, and engage the

[1] Dr. Ellis, of Boston, in answer to an inquiry from me in regard to Malgaigne's hooks, says, "They are not liked here, and are never used." Dr. H. D. Noyes, of New York, writes me that in 1854 he saw a case treated with them by Dr. Buck. They produced so much inflammation at the end of two weeks as to require removal. Abscesses subsequently formed around the joint, and the treatment was prolonged to twice the usual period. Bony union took place, but the joint remained quite rigid until the patient was lost sight of. "This case was pretty generally known among New York surgeons, and its results proved condemnatory of the hooks."

points in the upper edge of the upper fragment of the bone. The screw is now passed through the uprights, and turned until the fragments are brought as firmly together as may seem safe. When screwed home, the opposing points are rather less than an inch and a half apart.

All that is necessary to secure the mechanical effect of this instrument is to engage the points properly. The slipping of the upper hooks, spoken of by M. Malgaigne as apt to occur at about the seventeenth to the twenty-second day, did not take place in my own patient, nor do I see how it is possible if the points are rightly applied. One precaution should be taken: to guard the screw by some arrangement of hoops, lest it be subjected to any sudden wrench. Supporting the limb by a posterior splint, although not essential, is, of course, judicious.

In the second place, as to the supposed dangers of this plan. The worst of these would, of course, be that of perforation of the knee-joint by the hooks. But this, as my friend Dr. Brinton and myself have proved by experiment upon the dead subject, is an anatomical impossibility. We not only applied the instrument as for a fracture, but we attempted to drive the points in after the joint had been opened along the lateral edge of the patella. Hence the dread of such an accident in practice may be abandoned.

Another danger that might, *a priori*, be anticipated, is that of ulceration. But my patient had nothing of the kind; there were not three drops of pus discharged from all four of the perforations made in the skin, although around each hook a small circle of induration existed. Nor is there any greater risk of necrosis, since the points do not really enter the bone.

As to the pain caused by such an instrument, it is limited to the few hours succeeding the first application. My patient declared throughout that she felt quite as comfortable as she had when the adhesive strips only were employed. And if necessary, in a nervous or timid subject, anæsthesia might be resorted to when the hooks were put in place.

Lastly, as to the advantages afforded by the plan. It must be obvious that in no other way can we act so directly upon the fragments, or secure them so firmly in apposition; in fact, every other plan is more or less open to the objection that the pressure exerted falls mainly upon the tip of each fragment, so as to tilt the opposed surfaces upwards, and create a V-shaped gap between them. Nor can we by any other means enable the patient to sit up in bed or in an easy-chair, without risk of affecting the closeness of the subsequent union. Moreover, it is easy at any time to test the accuracy of the coaptation, by trying whether the bone and the instrument move as one mass. And finally, we may dispense in a great measure —in fact, almost entirely—with the heating and galling constraint of a firmly-applied bandage, so necessary in most cases of fracture of the patella; or, at least, this may be left off at a much earlier stage of the treatment than when the usual method is employed.

I have dwelt more fully upon the plan proposed by M. Malgaigne, because in the two latest and most authoritative American works bearing upon fractures—the elaborate treatise of Dr. Hamilton, and the *System of Surgery* of Prof. Gross—it is passed over without the slightest mention; and I trust that my success with it may encourage others to careful experiments in its use, so that, if proved worthy upon further trial, it may be added to the therapeutical resources of American surgery.

ART. IX.—*Case of Rupture of the Common Duct of the Liver. Formation of a Cyst containing Bile. Death occurring on the fifty-third day. Autopsy.* By T. M. DRYSDALE, M. D., of Philadelphia. (With two wood-cuts.)

ON the 19th of September, 1859, I was requested by Dr. G. Spackman to visit George Pepper, aged 13 years, who had been injured, several weeks before, by the tongue of a fire-engine striking him in the right hypochondriac region, and forcibly pressing him against a wall, close to which he was standing, and injuring him so that he had to be carried home.

Dr. Spackman saw him about eight hours after the accident. He was then pale, with an anxious expression of countenance, and extremely prostrated. He had vomited a considerable quantity of blood, and was complaining of intense pain in the abdomen, which had seized him immediately after the injury. Dr. S. prescribed morph. sulph. gr. $\frac{1}{4}$, to be repeated every two hours until relief was obtained. After taking three doses of the medicine he slept for several hours. He vomited blood occasionally for three days.

The second day after the accident, his bowels not having been moved, a dose of castor oil was given, which caused an evacuation without any unusual pain, and brought away a large quantity of dark blood. He continued to pass blood with every alvine discharge for several days; and when the feces ceased to be mixed with it, they were nearly white, and ever since have been of a light clay colour.

The first time his bladder was emptied after the injury he passed bloody water, accompanied with a burning pain in the urethra; and for a week following his urine was stained with blood, after which it was very dark, with a green tinge, and extremely muddy.

Dr. S. remarked that the patient was slightly jaundiced on the third day. This increased until he became of a dark yellow colour. He vomited more or less every day, and food produced great agony until it was rejected; it also caused his abdomen to swell very much. He had but little abdominal tenderness, and could bear firm pressure without complaint. Very little medicine was given; in addition to the oleum ricini, already mentioned, he twice took the citrate of magnesia, as his bowels were constipated.

For the jaundice, Dr. S. prescribed the following pills, one to be given every three hours: ℞.—Mass. hydrar. gr. viij; pulv. ipecac, pulv. opii, āā gr. j.—M. et div. in pil. viij. These were followed by a powder composed of hyd. chlor. mit. gr. j; pulv. opii gr. $\frac{1}{2}$; to be repeated every four hours until he had taken twelve.